

FIG. 1A

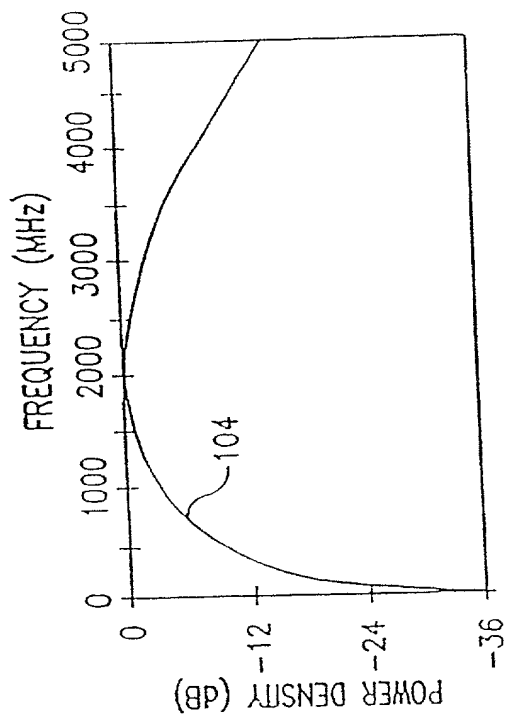


FIG. 1B

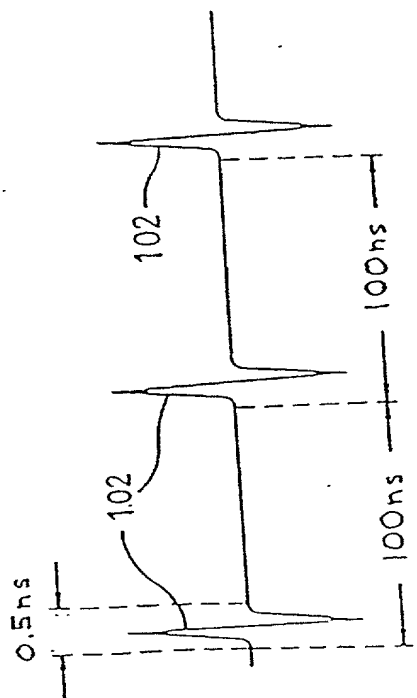
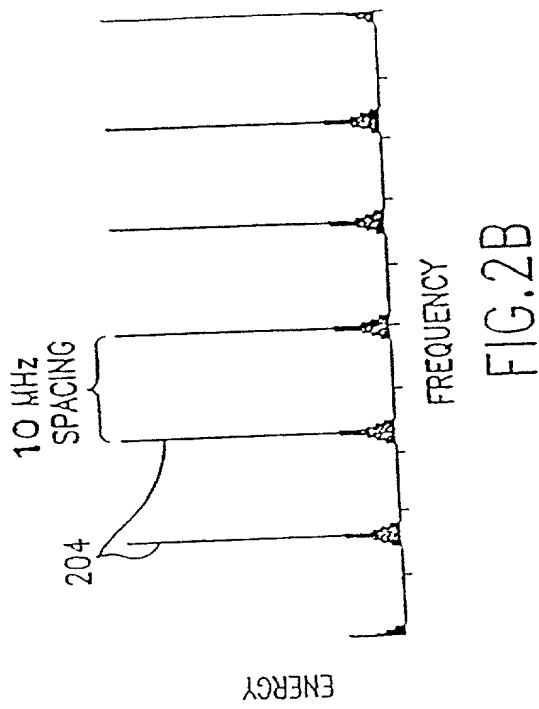


FIG. 2A

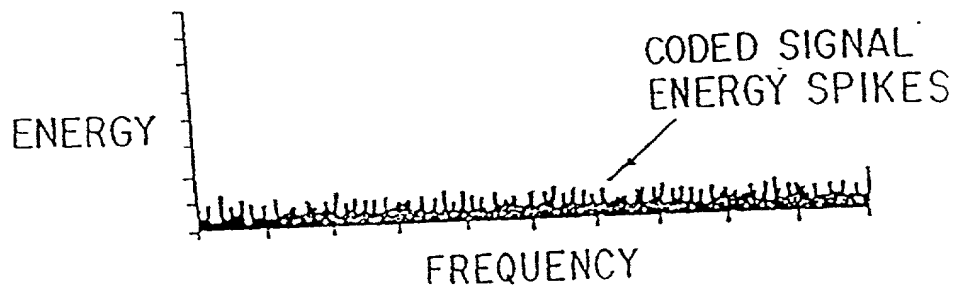


FIG. 3

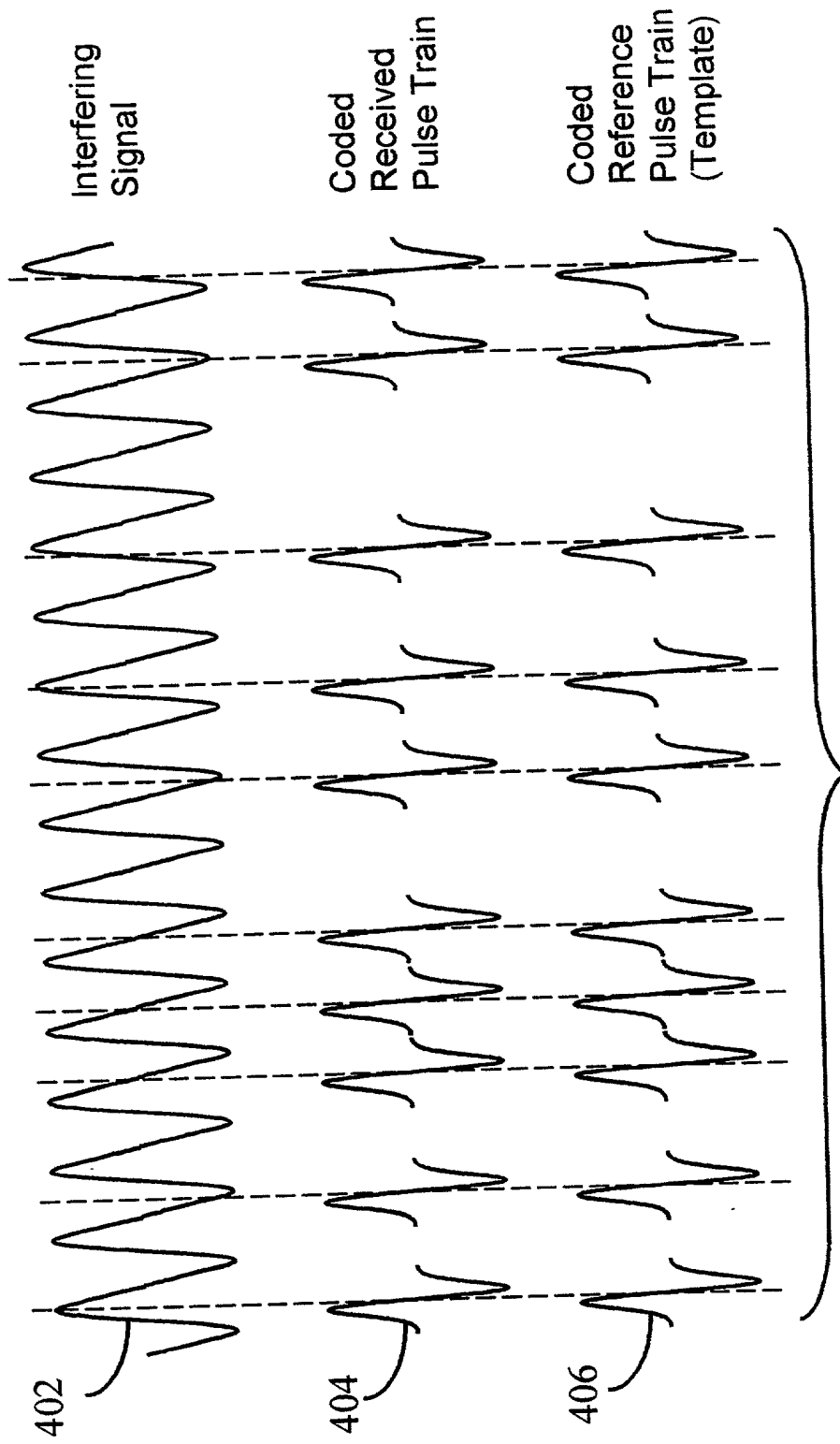


FIG. 4

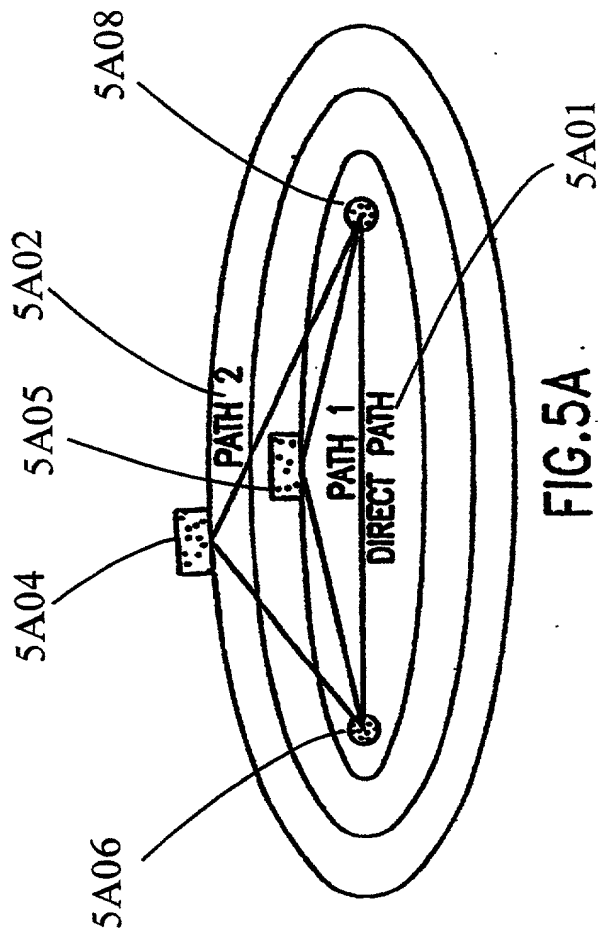


FIG. 5A

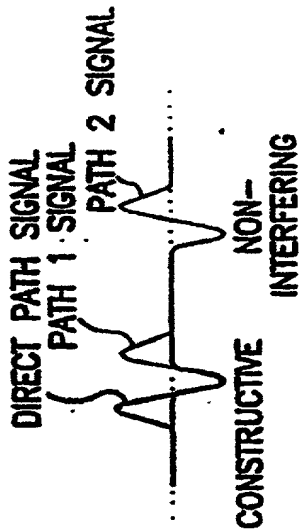
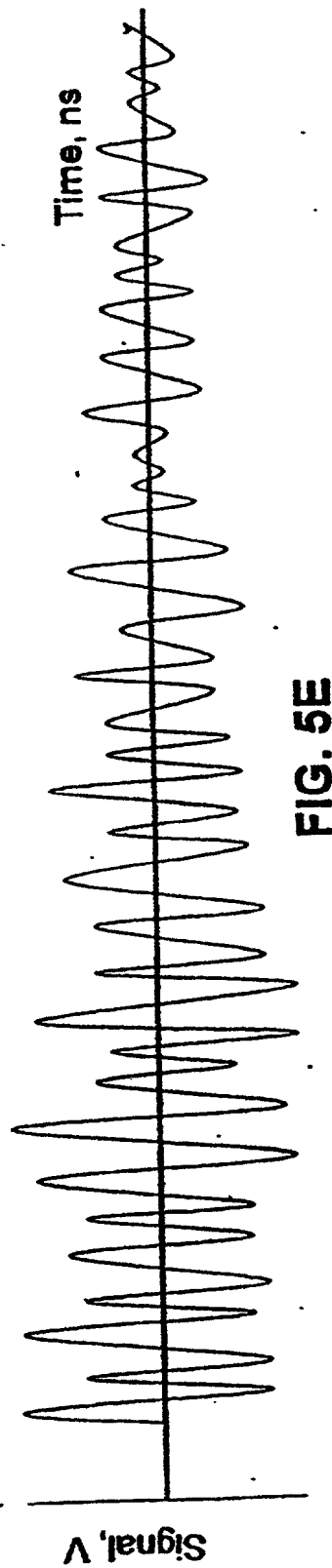
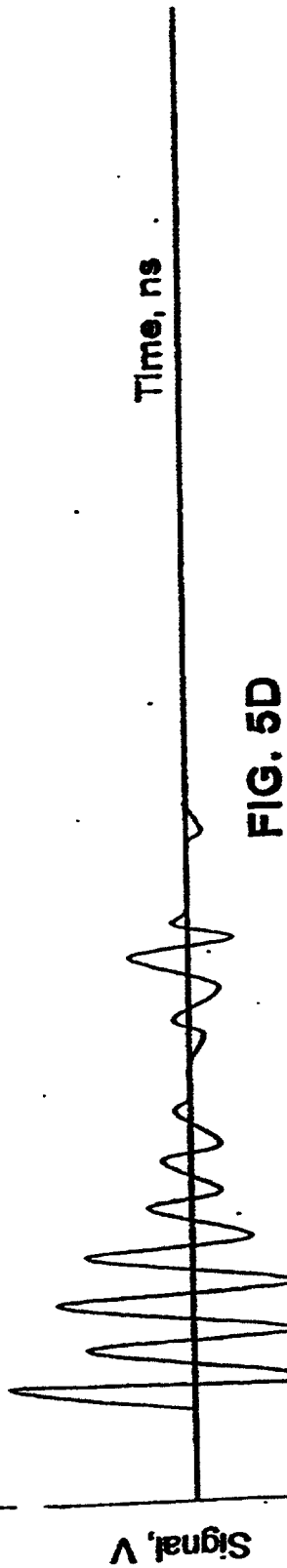
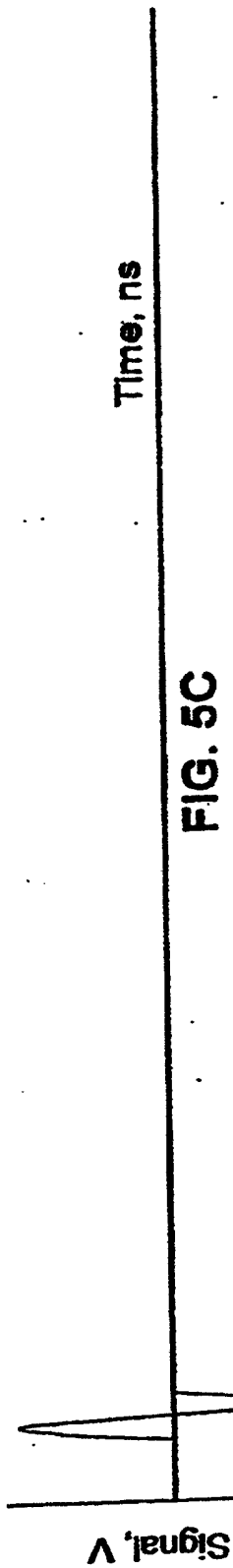


FIG. 5B



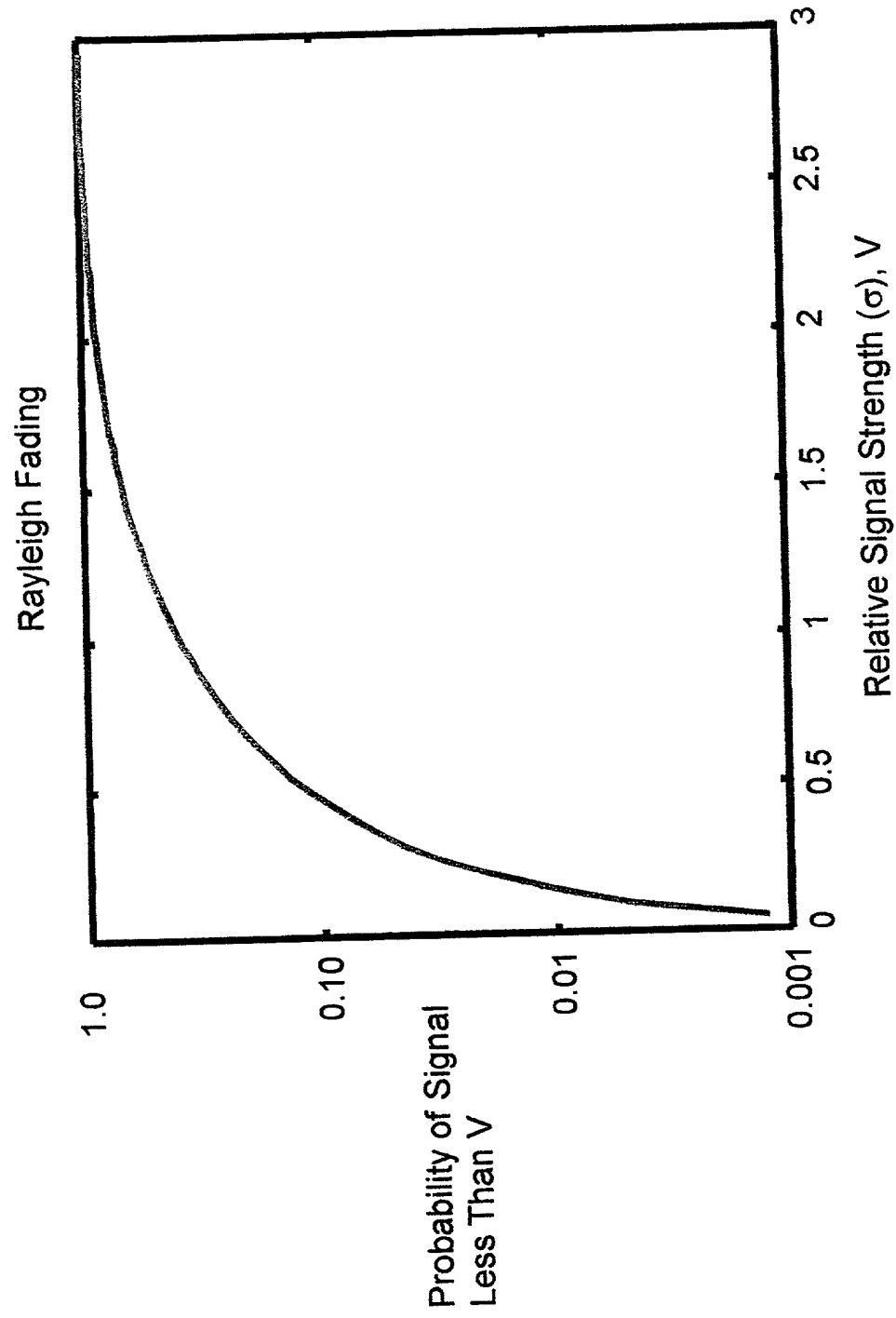


Fig. 5F

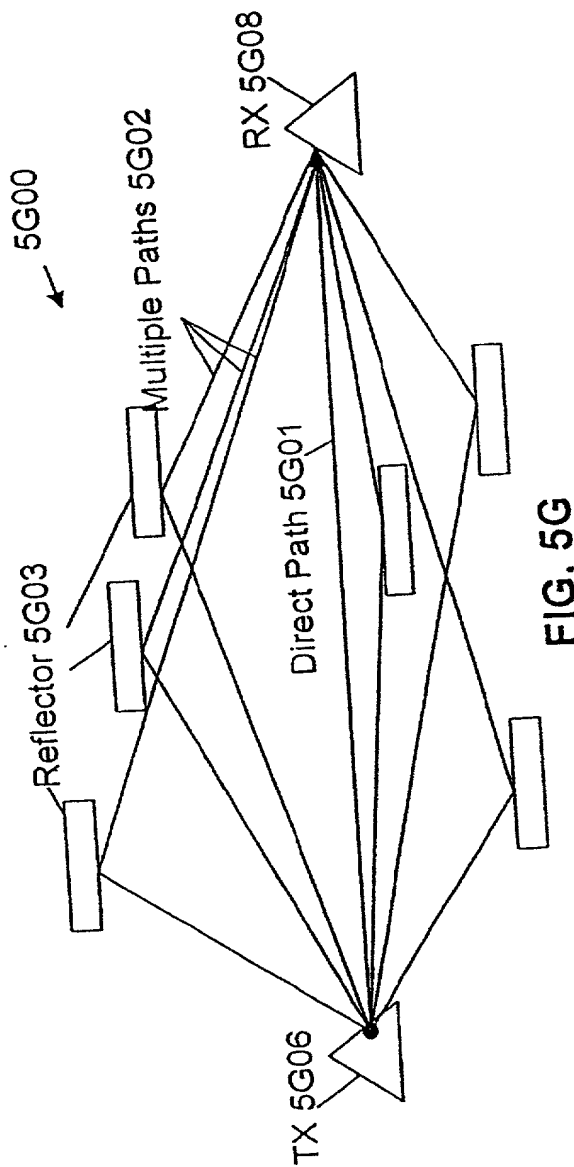


FIG. 5G

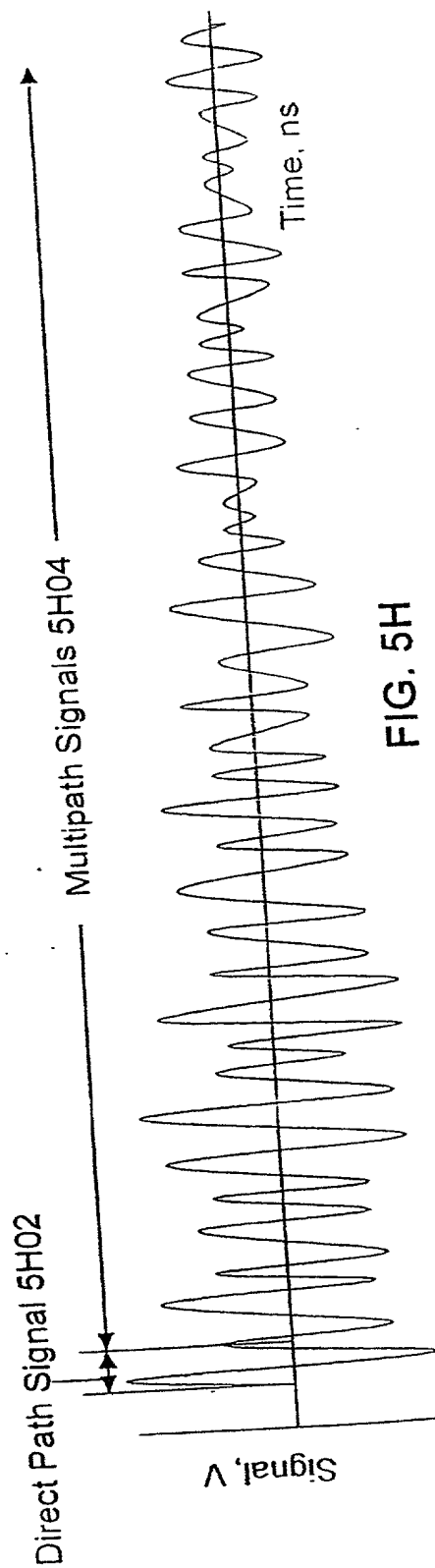


FIG. 5H

FIG. 7 is a block diagram of an impulse radio receiver 702. The receiver 702 includes an RX Antenna 704, a Subcarrier Demodulator 712, a Pulse Sum 734, an S/H 736, a Detector 738, and a Received Signal 739. The receiver 702 also includes a Template 728, a Lock Loop Filter 742, an RX Time Base 718, a Precision Timing Generator 714, and a Code Source 722. The receiver 702 is shown in FIG. 7.

FIG. 7

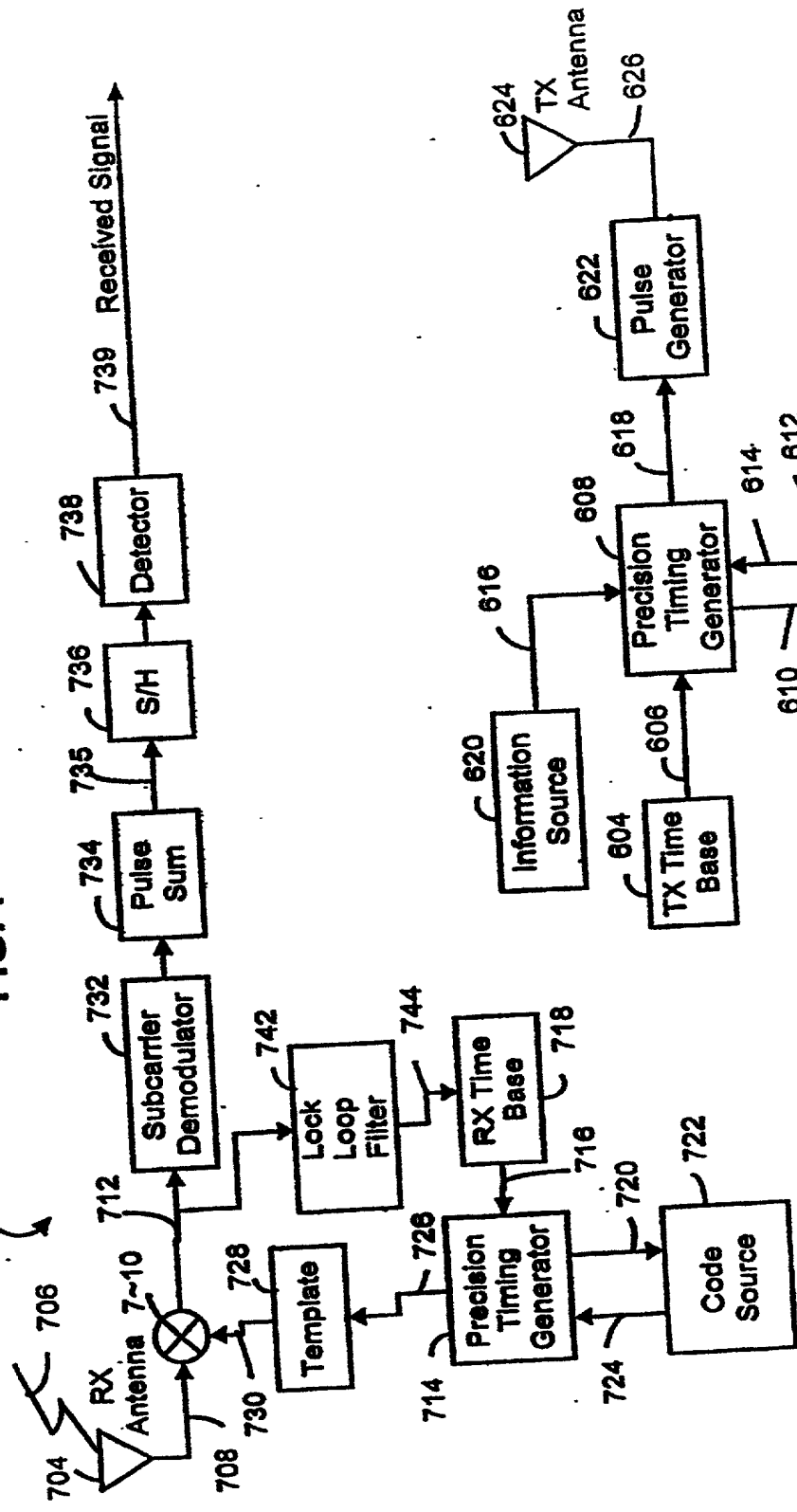
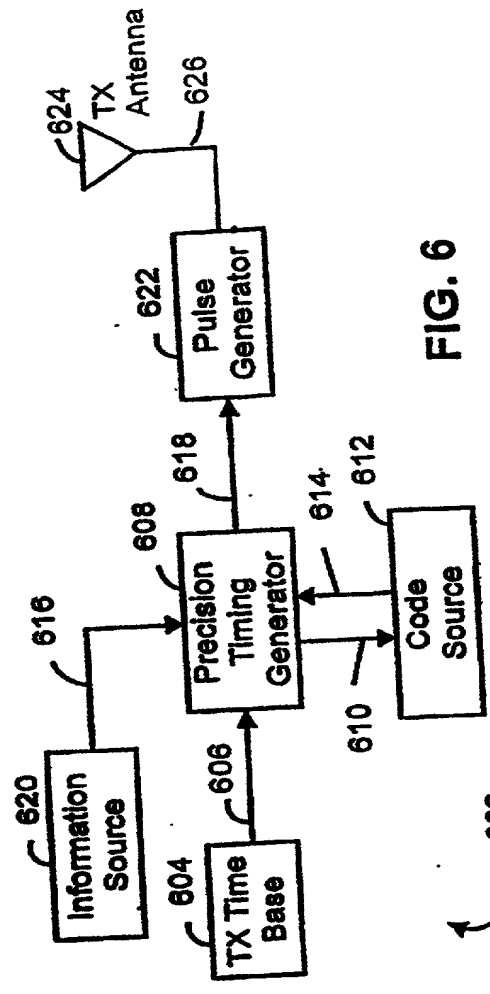


FIG. 6



Impulse Radio Transmitter

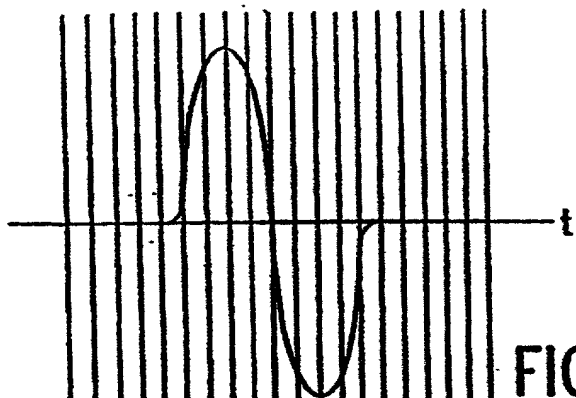


FIG. 8A

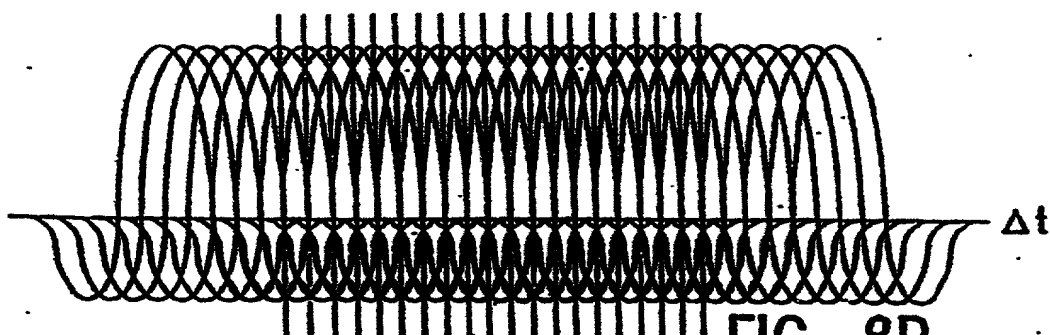
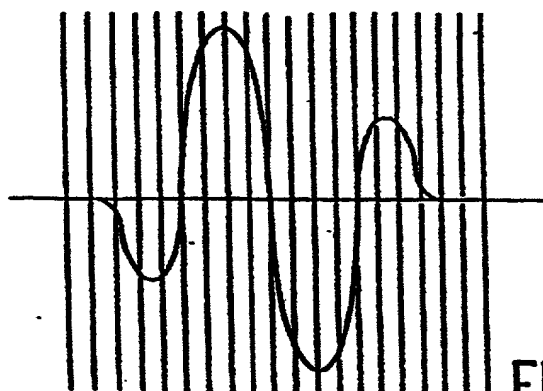


FIG. 8B



CORRESPONDING
TO EACH
 Δt

FIG. 8C

face may be read by moving the reader across the surface. The hand held reader includes a light source and light detector mounted on a handle of the reader. A rev- 902
908 910
912 920
924
connected to the means of optical fiber read head maintaining distance from the surface read head to the provided with sensors provided in the required for need for of indicia sensors a being read sensors.

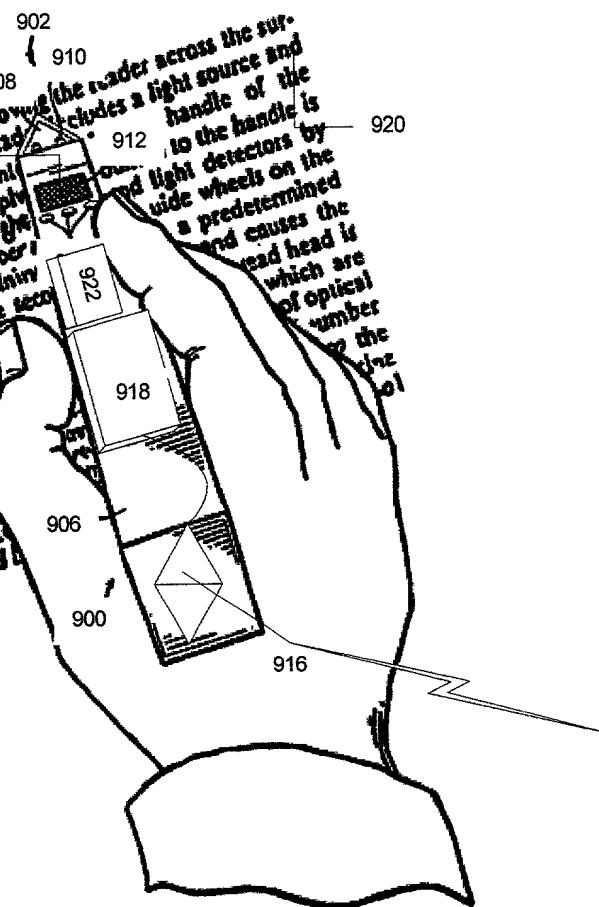


FIG. 9

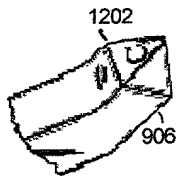


FIG. 12

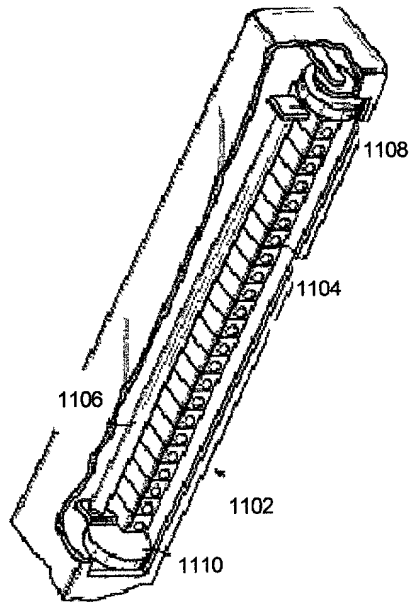


FIG. 11

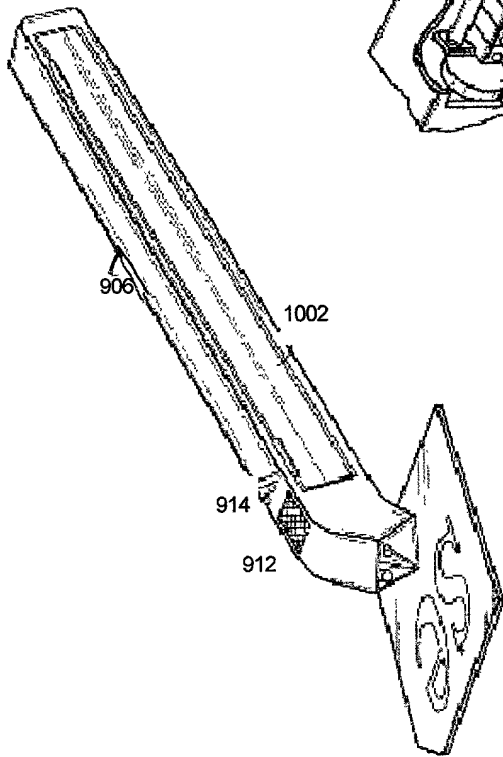


FIG. 10

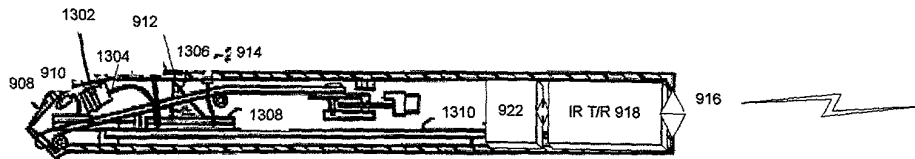


FIG. 13

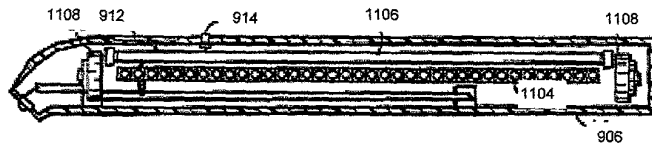


FIG. 14

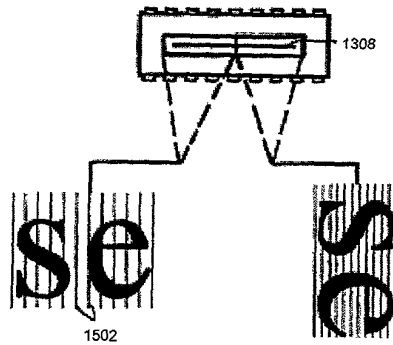


FIG. 15

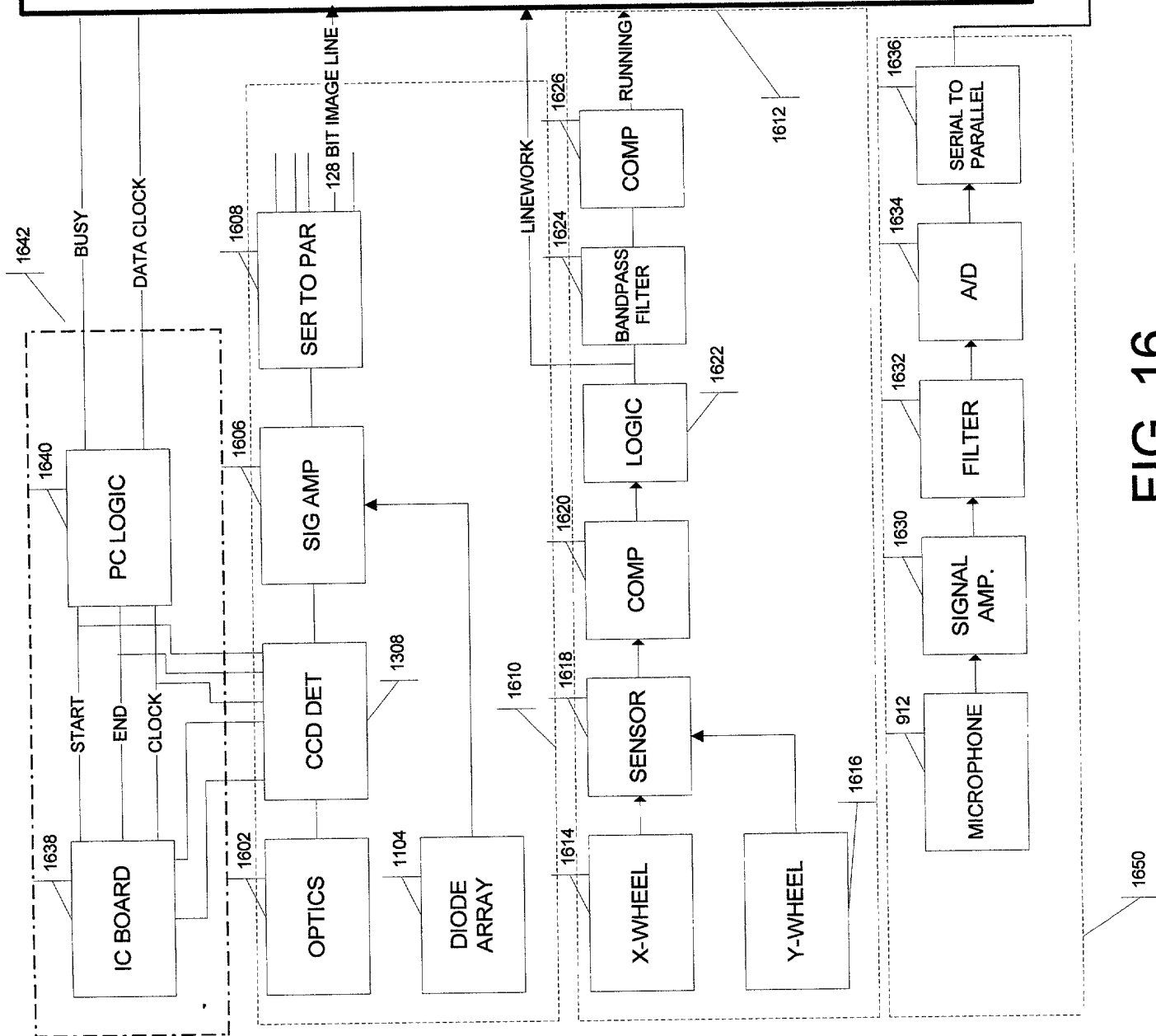


FIG. 16

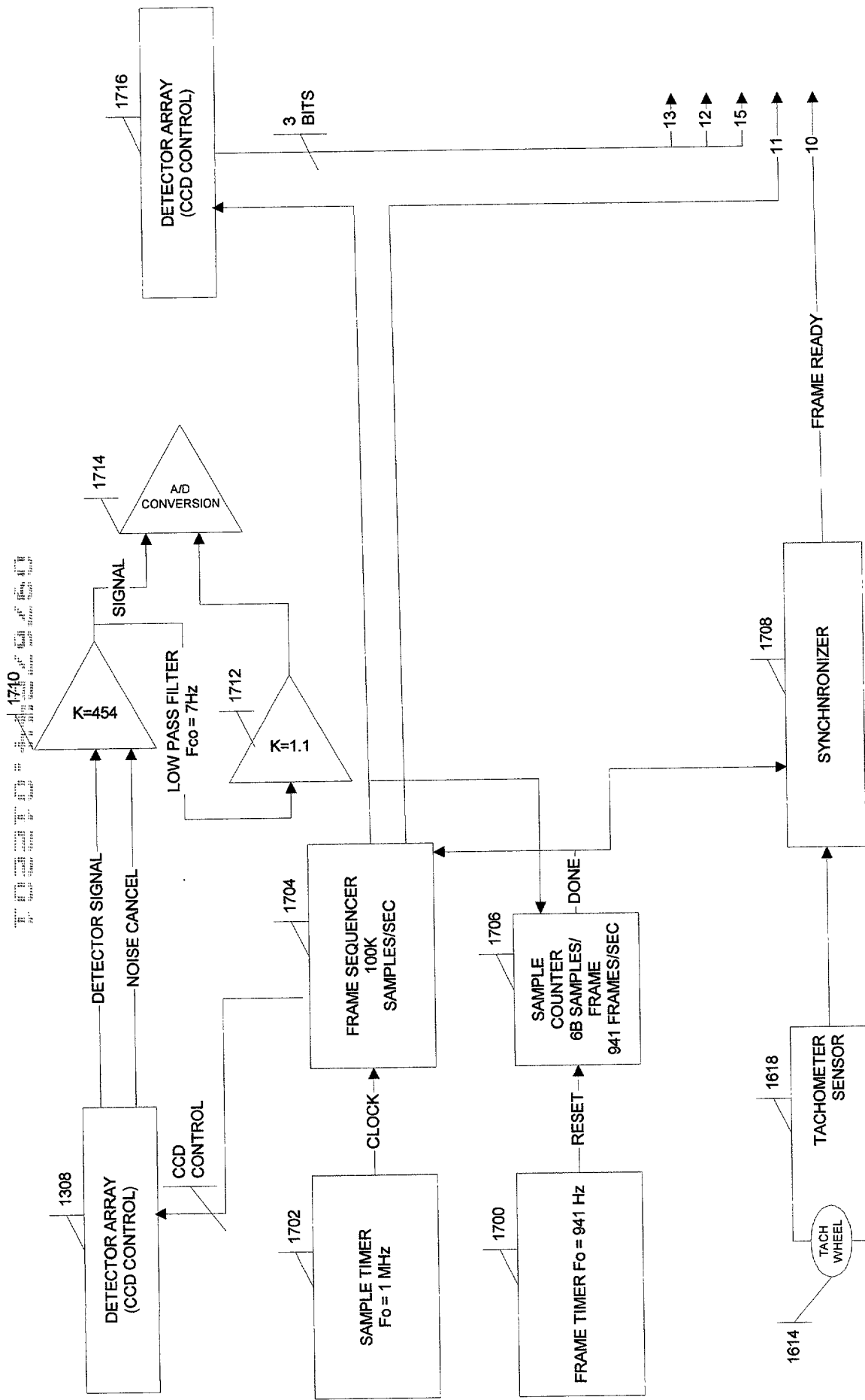


FIG. 17

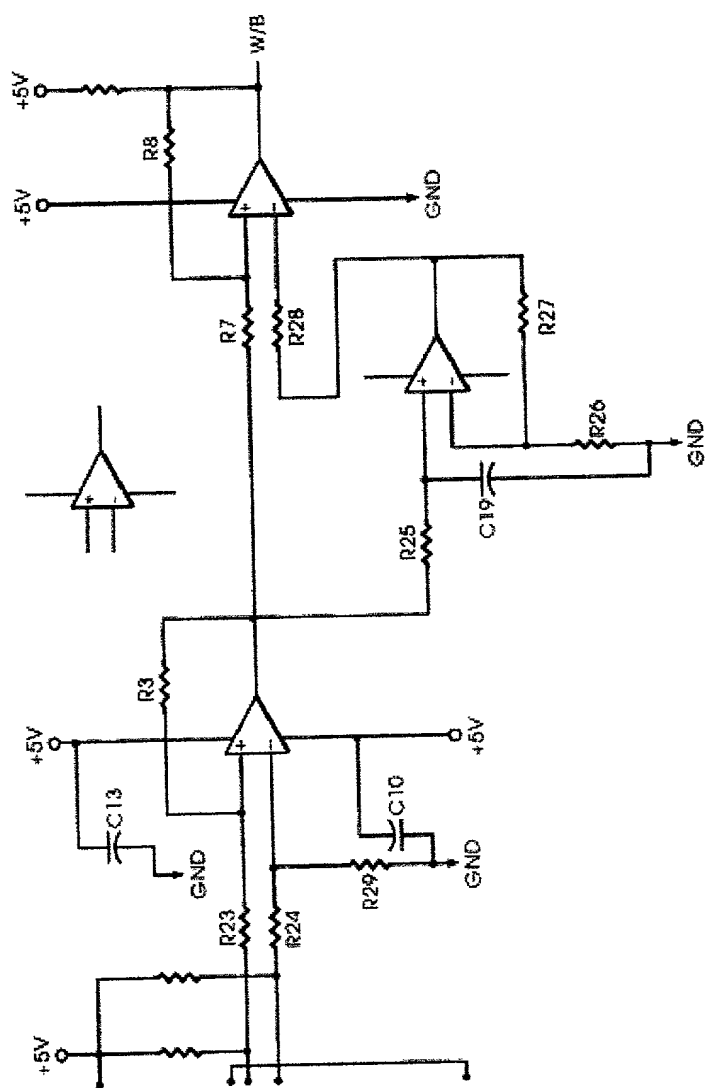


FIG. 18

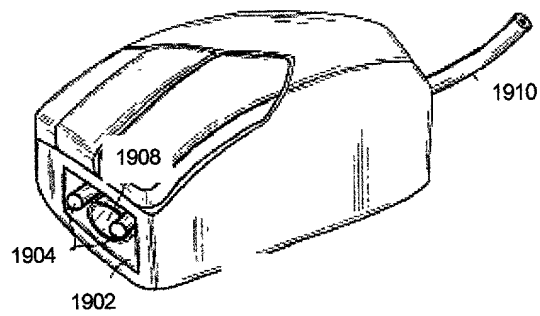


FIG. 19

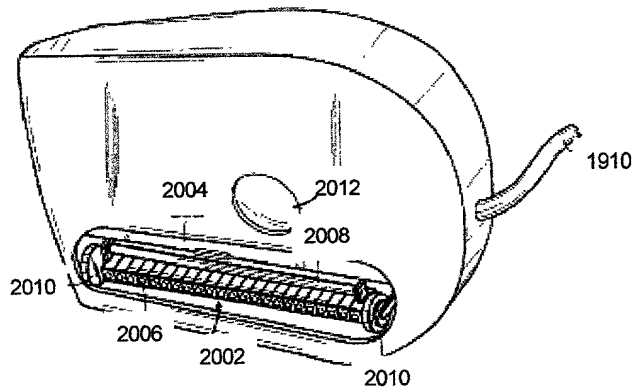


FIG. 20

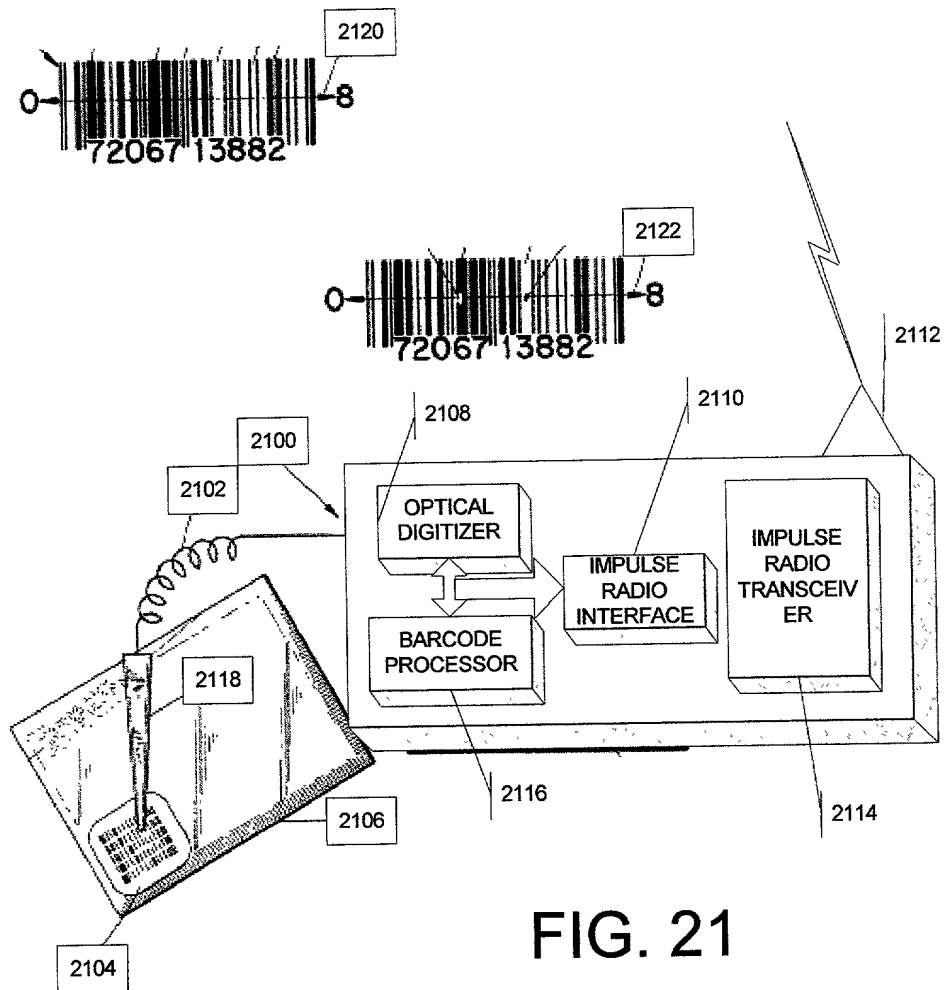


FIG. 21